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ABSTRACT

A longitudinal study (1960-1966) investigated the effects of home environment on school achievement. This preliminary report focuses on children who were enrolled in junior kindergarten in 1960. The following year all children enrolled in senior kindergarten became part of the study. The first section of the document outlines data collection procedures using a parent interview questionnaire, and describes items selected for analysis. Pupil scores on one specially developed test and two standardized mental tests were used along with teacher ratings in a multiple regression analysis. The document section concerned with results and discussion answers four questions that guided the study: (1) What nonschool variables are the best predictors of school achievement? (2) Does home environment make more of a difference to scores on an objective standardized test or is it more likely to affect the teacher's judgments of a child? Is socioeconomic status relevant in trying to explain school achievement? and (4) Does IQ make a difference or do actions in the home provide a better explanation of a child's performance? Appendixes comprise one-half of the document. (WY)

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SCHOOL ACHIEVEMENT: A PRELIMINARY LOOK AT THE EFFECTS OF THE HOME

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INTRODUCTION

Why does one child have more success in school than another? What does he have which the second child lacks? At first glance, the answers to these questions may seem to be rather obvious -- one child is "brighter" than another, or more highly motivated than another or he comes from a home characterized as being higher than another in socio-economic status. However, an examination of the research literature revealed that those characteristics which typically have been used to assess home background, such as social class, father's occupation and parent's education, account for only a small portion of the variability in children's educational achievement. There is considerable variability in achievement <u>within</u> the same social class still unexplained:

> What does the child "bring with him" from home that will make a difference to his school success?
>
> What information about the home will provide a better idea of how much success the child will achieve in school?

This is the first of a series of reports which will attempt to provide some answers to these questions.

THE STUDY OF ACHIEVEMENT
(1960-1966)

A Brief Outline

The longitudinal Study of Achievement began in the Fall of 1960, with the 1,486 children who were enrolled in junior kindergarten. The following year, all children enrolled in senior kindergarten, i.e. 8,695 including the above 1,486, became a part of the study. The data collected for each of these students included information and scores on the following:

1. Pupil Profile Folder completed by the senior kindergarten teacher;
2. Draw-A-Classroom Test administered on two occasions in each of junior and senior kindergarten, and once in grades one, two and three;
3. Otis Quick-Scoring Mental Ability Tests (new edition -- Alpha Short Form) administered in grade two;
4. Metropolitan Achievement Test administered in grades one, two and three;
5. Rating Questionnaires completed by the teachers in senior kindergarten, grades one, two, three, four and six.

The background information recorded on the Pupil Profile Folder included parent's education and occupational status, country of birth, languages spoken in the home, number of children in the family and number of adults living in the house.

The Draw-A-Classroom Test was a unique instrument devised by the Research Department to provide an indicator of the pupil's developmental progress.

The Metropolitan Achievement Test and the Otis Quick-Scoring Mental Ability Test are standardized tests which provide measures of achievement and intelligence, respectively.

The Teacher Rating Questionnaires (one for each grade level) were developed by the Research Department in an attempt to tap some of the less tangible aspects of the concept "achievement." They were completed by the classroom teachers who had taught the pupils and knew them. The teachers were asked to rate each pupil on a five point scale in terms of behaviour in a number of areas. For example, in senior kindergarten, grades one and two, the areas were labelled Language, Social, Emotional, Mental and Physical Development. For grades three, four and six, the questionnaire was considerably modified and the categories entitled Adjustment, Performance, Creativity and Prediction.

Since "achievement" within the school system may be interpreted as being closely related to the interaction between teacher and pupil, it was hypothesized that the teacher ratings would provide a measure of how the pupil was getting along in school, i.e. his school success or "achievement."

The Study of Achievement had two major objectives:

(1) to evaluate the effect of junior kindergarten attendance upon the achievement and development of children;

(2) to examine the nature of the world of junior and senior kindergarten children (i.e. via the Draw-A-Classroom Test).[1]

With regard to the first objective, it was hypothesized that children who attended junior kindergarten would show higher achievement

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1 The research conducted related to this objective of the Study of Achievement will not be mentioned further in this report. The interested reader is referred to the Research Department reports related to the Draw-A-Classroom Test.

scores than children who did not attend junior kindergarten, but began their schooling in senior kindergarten.

In order to compare those children beginning in junior kindergarten with those who began in senior kindergarten, two sets of matched pairs were established on the basis of information gathered in 1961-62. The matching procedure was necessary to control for the socio-economic bias in the junior kindergarten population, since junior kindergarten was intended for children living in lower socio-economic areas; two matched sets were necessary because some children lived in areas where junior kindergarten was not available. Therefore, in Match #1, the senior kindergarten children could have gone to junior kindergarten, but their parents chose not to send them, whereas in Match #2, the senior kindergarten children did not have junior kindergarten available to them in their area, therefore they could not attend. The factors on which junior and senior kindergarten pupils were matched were identical for both sets and included age, sex, language, education of father, education of mother and occupation of father. Match #1 (i.e. JK1 and SK1) consisted of 608 pairs and Match #2 (JK2 and SK2) consisted of 661 pairs.

Generally, the results indicated that in Match #1, the junior kindergarten group surpassed the senior kindergarten group, i.e. they obtained higher teacher ratings and M.A.T. scores and higher Otis I.Q. scores. In Match #2, the differences tended to be minor and not statistically significant, although they were for the most part in the same direction as in Match #1.

Since the junior and senior kindergarten groups were matched so as to eliminate the socio-economic bias present in the junior kindergarten population, it seemed likely that the differences between JK1 and

SK1 could not be attributed to differences in such socio-economic indices. Therefore, it was hypothesized that the differences might be due to familial factors, possibly the attitudes of the parents toward education, or possibly home values in general. Further, since the SK2 parents did not have the opportunity to send their children to junior kindergarten, their attitudes toward the importance of early education were unknown and presumably exerted a random influence on the children's achievement scores. This was supported by the finding of no difference between JK2 and SK2.

A comparison of the two JK groups (i.e. JK1 versus JK2) indicated no significant differences, while a comparison of the two SK groups (i.e. SK1 versus SK2) indicated that there were consistent significant differences between these two groups, in favour of SK2. Such a finding provided more support for the hypothesis that it was factors in the home environment which were contributing to the obtained differences.

Before the Study of Achievement was extended to investigate the importance of some of these non-school factors, the research literature pertaining to the relationship between home environment and achievement was surveyed.[2] The findings were organized under the following headings:

1. Social Class and Achievement;
2. Power Structure and Achievement;
3. Child-rearing Practices and Achievement;
4. Religious Affiliation and Achievement;
5. Parental Attitudes and Achievement.

Palmer (1967) concluded that "the powerful influence of the home on the motivation and achievement of the child is an undeniable reality" (p. 19).

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2 As an extensive report of this survey is contained in the Research Department publication Home Environment and Achievement (1967), it will be mentioned only briefly in this report.

In light of these positive findings, and in light of the fact that achievement data (i.e. M.A.T. scores and teacher ratings) were already available for a sample of children from the Study of Achievement, a study was mounted in which information obtained from parents regarding their home background and attitudes toward education could be related to the already existing achievement data for the children.

Since the information collected was too extensive to be included in a single report, this first report will be concerned only with the relationship between some of those aspects of the home which might be called the "educational environment" and the school achievement of the child.

PROCEDURE

Description of Population

The matching procedure described previously resulted in the establishment of 608 pairs in Match #1 and 661 pairs in Match #2, consequently there was a potential interview population of 1,269 parents whose children had attended only senior kindergarten. Due to attrition, however, by 1967 when the interviews were conducted, the children of only 845 of these parents remained in the Toronto school system.

Since the City of Toronto includes many immigrants, it was likely that a proportion of the 845 parents could best complete the questionnaire if the interview was conducted in a language other than English; therefore, it was decided that in addition to English, the interview would be conducted in six other languages, namely, Chinese, German, Greek, Italian, Polish and Ukrainian. This decision eliminated 36 parents whose native language was other than the six listed above.

Of the remaining 809 parents, 55 could not be contacted, 33 refused to be interviewed and 721 interviews were completed. The sample of parents interviewed was found to be representative of the Ontario urban population with respect to the factors of income, father's education and occupation, and mother's education and occupation.[3]

Background and Development of the Parent Interview Questionnaire

Prior research (see Palmer, 1967) suggested many areas to be included in the parent questionnaire. Since a number of studies (e.g.,

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3 For a more complete discussion see The Measurement of Socio-Economic Status: A Technical Note, Research Department, 1969.

Dave, 1963; Elder, 1965; Wolf, 1963) included parental inventories, some information was available concerning items which might differentiate among, for example, different social classes or occupational groupings as well as a number of other category breakdowns. A sample of research conclusions from Palmer's (1967) paper gives an illustration of some of the kinds of questions which were considered fruitful to pursue:

> "Kohn (1959) found that 'the lower-class mother puts emphasis on obedience, neatness, and cleanliness while the middle-class mother stresses happiness, consideration and curiosity.'"
>
> (Palmer, 1967, p. 5)

> "Wall and Miller (1962):
> 'Children, particularly boys, do much better at school if their parents are interested in their progress.'"
>
> (Palmer, 1967, p. 15)

> "Elder (1962) found that 'high academic motivation and achievement were most likely among those youths who were from Protestant families in the middle-class and Catholic families in the lower-class.'"
>
> (Palmer, 1967, p. 15)

The final form of the questionnaire contained 65 items and was divided into five sections. A brief summary of the items included in each section follows.

Section A -- contained items concerning family background, i.e. number of siblings, age of parents, religious preference, parents' educational and occupational attainment; parents' aspirations and expectations for their child's educational and occupational achievement; and the number of rooms in the home and their use by the family.

Section B -- dealt with the frequency and nature of the parent's contact with the school; the

accessibility and use of communication media, e.g., T.V., books and libraries, newspaper and magazines; and attitudes concerning equal opportunities for advanced education and jobs.

Section C -- included several questions which asked parents to rank procedures for managing their child and qualities which they felt were important for their child, e.g., neatness, happiness, punctuality, etc. Another set of items in this section asked about the age at which the parent considered the child to be able to perform certain activities on his own, i.e. the degree of independence training.

Section D -- included items related to the amount and source of the family's income.

Section E -- was completed by the interviewer who rated the type and quality of the family's dwelling and the surrounding area.

The questionnaire was administered in a one-hour face-to-face interview in April and May of 1967. In the majority of cases, it was the mother who was interviewed, although there were a few instances in which there was no mother in the home and so another family member had to be interviewed. Where there was a relative who looked after the children, e.g., a grandmother or aunt, this person was interviewed and in a few cases, the father was interviewed. Since there were so few people who fell into the latter two categories, they have not been analyzed separately.

All of the interviewing was conducted by an independent market research firm.

It should be noted that the children of the parents interviewed would have been in grade five if they had received normal promotion since enrolling in senior kindergarten in 1961.

Items Selected for Analysis

The data derived from all five sections of the questionnaire could not be meaningfully handled except through a series of reports which will deal with only a portion of the data at any one time. When these are completed, a paper will be written to summarize all significant findings.

Using the results of similar research undertaken by Dave (1963) as a guideline, as well as the results of some preliminary analyses of the Study of Achievement data, the following eight questionnaire items[4] were selected to be included in the first analysis:

1. Does the mother regularly read the newspaper?
2. How far would the parents like their child to go in school (i.e. desired educational level)?
3. How far do they really expect the child will actually go (i.e. anticipated educational level)?
4. What language is spoken in the home?
5. Does the mother know the teacher's name?
6. How many books are there in the home suitable for children?
7. Parent's desired occupation for child.
8. Parent's anticipated occupation for child.

It was felt that the information from these items covered a range of characteristics in the home which might be related to the child's educational development. It was hoped that the findings based on the analyses of these home environment factors would help to establish priorities for the more detailed analyses which will follow.

Both measures of achievement available for each child were used in this first analysis. Since many people like to think of performance

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4 The answer categories and accompanying codes for each of the eight questions are shown in Appendix A.

on standardized tests as the best indicator of a child's achievement or school success, it was important to use the scores available from the M.A.T., even though this test had been administered two years prior to the date at which the parent interviews were administered. In any school system, however, the teacher is also a critical variable in the child's school success, therefore her rating of the child in the classroom may be considered as a measure of the child's school achievement. Although teacher ratings were available from both grade three and grade six, the grade three scores[5] were used in the first analysis since they were obtained during the same year that the M.A.T. was administered. Further analyses will use the grade six teacher ratings as well.

Questions Raised

As has been indicated in the previous pages, there are a number of questions to be answered by this first analysis:

1. What non-school variables are the best predictors of school achievement?
2. Does home environment make more of a difference to scores on an objective standardized test or is it more likely to affect the teacher's judgment of a child?
3. Is socio-economic status relevant in trying to explain school achievement?
4. Does I.Q. make a difference or do factors in the home provide a better explanation of a child's performance?

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5 A copy of the grade three Teacher Rating Questionnaire is included in Appendix A.

RESULTS AND DISCUSSION

Statistical Procedures Used

Although the major statistical procedure (i.e. multiple linear regression) used in the analysis of the data for this report is mathematically complex, the principles underlying it are fairly simple to understand.

Multiple regression analysis demands an understanding of the term "correlation" as a first step. Correlation may be defined as a measure of the degree of association between scores on two variables or items. For example, knowledge of the correlation coefficient between two scores on separate tests provides an index or measure of the extent to which having a knowledge of the scores on only one of the tests permits prediction of what the score would be on the second test.

Multiple Regression Analysis. This statistical procedure was used to determine how well school achievement could be predicted from a knowledge of some aspects of the home environment. Do pupils with one set of home environment characteristics get higher achievement scores than those with another set of characteristics?

Multiple linear regression takes the selected items (i.e. the home environment variables) and proportions them in such a way as to provide the best possible prediction of the criterion variable (i.e. in this particular instance the achievement scores). The optimal proportioning provides weights to be assigned so that the most efficient predictor is assigned the largest weight. Eventually the point is reached where adding more variables does not improve the accuracy of the prediction. At this final point, a measure of "accuracy" is provided which indicates

how much of the variability in the criterion variables can be explained by the remaining set of predictor variables taken together. This technique reduces the original number of predictor variables included in the analysis to the smallest number which have the maximum explanatory power.

Although it will be necessary to use some technical terms in the following section to describe the results, an effort will be made to keep these to a minimum.

Results of the Regression Analyses

Two series of regression analyses were conducted, one in which each of the Metropolitan Achievement subtest scores and one in which each of the teacher rating subtest scores was used as the criterion measure. Each series consisted of a subset of seven analyses in which for each criterion measure, some combination of the home environment variables, socio-economic status[6] and I.Q. score[7] was used as the predictor variables:

(1) home environment alone;
(2) home environment + socio-economic status;
(3) home environment + I.Q. score;
(4) home environment + socio-economic status + I.Q. score;
(5) socio-economic status alone;
(6) I.Q. score alone;
(7) socio-economic status + I.Q. score.

Since seven of the M.A.T. subtests were used as criterion measures, a total of 49 analyses were done with this measure of achievement as criterion; scores from four teacher rating subtests were used as criterion resulting in 28 regression analyses in Series 2.

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6 The index of socio-economic status used was established on the basis of procedures described in The Measurement of Socio-Economic Status: A Technical Note, Research Department, 1969.

7 It will be recalled that this information was obtained from the children in the Study of Achievement population in 1963-64 when the children were in grade two.

Although the parent interview questionnaire was completed by 721 parents, complete achievement and I.Q. score data were not available for the children of each of these 721 parents. Complete information, i.e. home environment data, socio-economic status, I.Q. score, and achievement scores, was available for only 520 children.

The results of the regression analyses will be discussed within the framework of the questions raised in the previous section. Since a discussion of each of the individual regressions done would be long and tedious, only the general patterns in the data will be mentioned.

The tables containing the obtained regression equations do not appear in text but are presented in Appendix B. The reader with technical interests may wish to examine them himself rather than read the following discussion.

What Non-school Variables are the Best Predictors of School Achievement?

Although eight home environment variables were included as predictor variables in the regression analyses included in this report, only four can be considered as "good" predictors, i.e. account for a significant per cent of the variance in each of the criterion measures, respectively, the M.A.T. or the Teacher Rating Questionnaire. The four variables are:

(1) parent's desired education for child;
(2) parent's anticipated education for child;
(3) whether or not the mother reads the newspaper regularly;
(4) number of books in the home suitable for children.

Each of these four variables, however, was not equally efficient in accounting for the variance of each of the different subtests of the two measures of achievement.

The results of the analyses involving each of the Metropolitan Achievement subtests as the criterion measure were the most consistent and uniform across all subtests. Two of the home variables, i.e. parent's anticipated education for their child, and number of books in the home suitable for children, accounted for a significant reduction in the variance of <u>each</u> of the subtests (see Table 1, Appendix B). Knowledge of the remaining home variables would not allow a better prediction of the child's performance on any of the M.A.T. subtests.

The results for the Teacher Rating Questionnaire, however, were not as consistent across all subtests (see Table 8, Appendix B). Although parent's anticipated education for their child and number of books in the home suitable for the child were again important as predictors of the variability in each of the teacher rating subtests, as was the case with the M.A.T., information on two additional home environment variables was also significant. In the case of the Adjustment and Performance subtests, parent's desired education for their child was significant in addition to the above variables, whereas in the case of the Creativity and Prediction subtests, information as to whether or not the mother read the newspaper significantly increased the amount of variance which could be accounted for.

Thus, the best prediction of the standardized test scores was made using two of the eight measures of the home environment; teacher ratings required three of the eight measures.

<u>Does the Home Environment Make More of a Difference to Scores on an Objective Standardized Test or is it More Likely to Affect the Teacher's Judgment of a Child</u>?

This question can be answered quite simply -- yes, information on certain factors in the home does allow a better prediction of the standardized test than it does of the teacher rating scores.

Thirteen to nineteen per cent of the variance of the M.A.T. subtests could be explained; furthermore, although the M.A.T. subtests cover a wide range of school-related skills -- vocabulary, grammar, reading and arithmetic, information on those home environment factors included in this analysis did not contribute substantially more to one kind of skill than to another. With one exception, the per cent of teacher rating variance explained was relatively uniform over all subtests, ranging from 11 to 14 per cent. The one exception was the subtest Adjustment; only 6% of these subtest scores could be accounted for by the information available on the home. (Factor analysis has suggested that the items on which this subtest score is based do not "behave" as do the other items.) It should be noted that in general home environment information provided better predictions of the M.A.T. than of ratings by teachers. One explanation for these differences might be related to the fact that standardized tests provide a constant referent. Since the M.A.T. is a standardized test, the scores for each child in our population of 520 were compared against the same common referent, i.e. the norms developed for the M.A.T.; on the Teacher Rating Questionnaire, however, children were rated by different teachers who would tend to rate relative to the other children in a particular school. Because the sample population included children from all areas which the Toronto school system encompasses, it is quite likely that the referent against which each child was rated varied somewhat from school to school. The introduction of this slight variability likely reduced the per cent of teacher rating variance for which the predictors could account.

Is Socio-economic Status Relevant in Trying to Explain School Achievement?

If one piece of information alone was available with which to predict a child's score on either achievement measure, i.e. the socio-economic status of the child's family, very little would be known about how the child would perform on the M.A.T. Only .7 to 3% of the subtests' variability could be accounted for. In addition, only 2% of the variability of one teacher rating subtest, Prediction, could be explained having a knowledge of socio-economic status (see Tables 5 and 13, Appendix B). Although the per cent of variance accounted for by socio-economic status alone was statistically significant in each of the above cases, it was a very small contribution. Approximately 97% of the variance in each of the subtests of each measure remained unexplained!

When information was available concerning the home environment variables (see Tables 2 and 9, Appendix B) socio-economic status added nothing; it did not increase significantly the prediction of any subtest score with the exception of the Language subtest of the M.A.T. and the Prediction subtest of the Teacher Rating Questionnaire. Because the Language subtest tapped knowledge of language usage and punctuation and since it is often assumed that one of the major weaknesses of lower socio-economic children and their families is related to their language development, it is not surprising that the Language subtest was one where a knowledge of socio-economic status did make a marked difference.

It is noteworthy that when predicting teacher ratings using both socio-economic status and the home environment variables, the results remained unchanged from those obtained when the home environment variables were used alone; one exception was noted for the Prediction subtest. This pattern of results appeared to indicate that in rating each child

relative to his classmates with regard to Adjustment, Performance and Creativity, the teacher did not take into account any information which she had concerning the child's socio-economic background. However, when the teacher had to predict how far the child would go in school[8], information regarding socio-economic background became more important. For those children whose families had a low socio-economic index, the teacher tended to predict that they would not go as far in school as those children whose families had higher socio-economic index scores. What is most dramatic about these findings is that on the average, the teacher does not seem to penalize the child from a lower socio-economic background in terms of his actual performance in class relative to his other classmates and in terms of his social behaviour in class; nor does she enhance or overrate the performance of children from higher socio-economic backgrounds.

Does I.Q. Make a Difference or do Factors in the Home or Socio-economic Status Provide a Better Explanation of a Child's Performance?

I.Q. alone is the best single predictor of a child's performance on the M.A.T. and his scores on the teacher rating subtests (see Tables 6 and 12, Appendix B). The per cent of variance accounted for was fairly uniform across all of the M.A.T. subtests and ranged from 16 to 29%, whereas the results for the teacher ratings were somewhat less consistent ranging from 6% of the Adjustment scores explained to 23% of the Prediction scores accounted for. These latter results are encouraging since they seem to indicate that the teacher uses the I.Q. information in those instances where it likely has most relevance, i.e. predicting how far the child will go in school and is least influenced by it in her rating of whether the child presents a discipline problem in the class-

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8 The reader should note that the Prediction subtest score is based on this one question alone.

room. Children with lower I.Q. scores generally were no more likely to be rated as being discipline problems than children with higher I.Q. scores.

When all three pieces of information were used together as predictor variables, with one exception, the general pattern of results was similar for both the M.A.T. and the Teacher Ratings (see Tables 4 and 11, Appendix B). Knowledge of socio-economic status added nothing to increase the prediction already obtained knowing both I.Q. and factors in the home. The one exception was the Language subtest of the M.A.T. In this instance, socio-economic status again made a small but significant contribution to the prediction of a child's score.

When I.Q. and home environment variables were used in combination as predictors, they provided a better prediction of both M.A.T. and teacher rating scores than either alone, or any other combination of predictors used in this study.

SUMMARY AND CONCLUSIONS

In this report two measures of school achievement were used, the Metropolitan Achievement Test (M.A.T.) and teacher's ratings of the pupils. The major findings are as follows:

(1) Of the eight home environment variables included in the analyses, only two could be considered as "useful" predictors of achievement, i.e., parent's anticipated education for the child and number of books in the home suitable for the child.

(2) The remaining six home environment variables did not make a difference in terms of the pupil's performance on either the M.A.T. or the Teacher Rating Questionnaire.

(3) Of the three separate pieces of information examined in this report, I.Q. provided the best prediction based on a single piece of information.

(4) Taking into consideration all combinations of the three predictor variables, the combination of I.Q. and the two home environment variables as predictors provided the best prediction of achievement performance on both the M.A.T. and the Teacher Rating Questionnaire. This combination explained approximately 30% of the achievement variability.

(5) Socio-economic status was of no utility in predicting performance on either the M.A.T. or the Teacher Rating Questionnaire.

This latter finding not only confirms some previous research findings that an index of socio-economic status can account for only a small portion of the variability in children's achievement, but hopefully it will be useful in persuading the reader that such is the case. Despite

research findings to the contrary, it is still frequently assumed that a knowledge of socio-economic status alone provides a good indicator of the child's success in elementary school.

In terms of the analyses reported here, the best single piece of information for predicting a child's performance on a standardized achievement test is his I.Q. score. Likely both the M.A.T. and the I.Q. test are measuring similar underlying abilities, since the correlations between I.Q. and the individual subtests of the M.A.T. range from .40 to .54. In the case of the teacher ratings, the correlations between I.Q. and the individual subtests range from a low of .25 with Adjustment, to .48 with Prediction. It will be recalled that I.Q. was a much better predictor of the Prediction subtest score than it was of the Adjustment score. It should be noted that the measure of I.Q. was based on a group intelligence test administered when the children were in the beginning of grade two, while the data on both the M.A.T. and the Teacher Rating Questionnaire were obtained when the children were near the end of grade three. Since group tests, especially with young children, are considered to be less reliable than individual tests and since the I.Q. and achievement data were obtained a year apart, these two factors would likely decrease the obtained correlations to some extent. Furthermore, the lapse of two years between the administration of the M.A.T. and teacher ratings and the gathering of home environment data may be contributing to the fact that the home environment could account for only a relatively small portion of the variability in the achievement data. In this instance, these results may be a reflection of the discrepancies in the data due to time. The home information is describing the child two years after his achievement data were collected. There is no information or assessment of the child's experiences during those intervening two years. This

limitation will be met in the further investigations utilizing the teacher rating data obtained when the children were in grade six, the year following the parent interviews.

This is the first in a series of reports on a study of the relationship between factors in the home and school achievement. The home variables included in the analyses in this report represent only a small sample of the information available. Further reports will detail more extensive analyses of the other information available.

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APPENDIX A

Interview questions included in the analyses reported in this paper:

1. Do you (i.e. the respondent) regularly read the newspaper?
   1 - yes
   2 - no

2. How far would you <u>like</u> (child's name) to go with his/her education?
   1 - eight years or less
   2 - some high school
   3 - high school graduation
   4 - some post-high school training
   5 - college graduation
   6 - post-college work
   7 - advanced degree
   8 - as far as possible

3. Judging by your child's record up until now, how far do you think he/she will <u>really</u> go?
   1 - eight years or less
   2 - some high school
   3 - high school graduation
   4 - some post-high school training
   5 - college graduation
   6 - post-college work
   7 - advanced degree
   8 - as far as possible

4. Language group* --
   1 - no English
   2 - English only
   3 - English bilingual

5. What is the name of your child's teacher?
   1 - name known
   2 - name unknown

---

* The order of these categories was established in light of findings from an independent Research Department study of learning English as a second language.

6. How many children's books do you have in your house suitable for children from eight to twelve?

   1 - none
   2 - 1 to 5
   3 - 5 to 10
   4 - 10 to 20
   5 - 20 to 50
   6 - 50 to 100
   7 - 100+

7. The next question deals with occupation. You might not have a specific occupation in mind for (child's name), but what <u>type</u> of occupation would you like him/her to have? Here is a list of groupings of various occupations which might help you.

8. Judging by your child's work at school and his interests now, what <u>type</u> of occupation do you think he is really likely to have? (SAME GROUPS AND CODES AS ABOVE)

BOYS	Qu. 7 LIKE	Qu. 8 REALLY	GIRLS
<u>Group 1</u>: electrician, plumber, carpenter, trucker, mechanic	3	3	<u>Group 1</u>: hairdresser, machine operator, nurse's aide
<u>Group 2</u>: manager of small store, teacher, administrator of small business	5	5	<u>Group 2</u>: manager of small store, nurse, teacher, in charge of hair salon
<u>Group 3</u>: business executive, doctor, lawyer, architect	7	7	<u>Group 3</u>: doctor, lawyer, architect
<u>Group 4</u>: sweeper, garbage man, parking lot attendant	1	1	<u>Group 4</u>: attendant at movies, cleaning lady
<u>Group 5</u>: labourer, assembly line worker, apartment janitor	2	2	<u>Group 5</u>: baby-sitter, worker on assembly line, cashier
<u>Group 6</u>: bank teller, salesman, filing clerk	4	4	<u>Group 6</u>: bank teller, filing clerk, steno
<u>Group 7</u>: manager of department store or industrial company, owner of medium size business, chemist	6	6	<u>Group 7</u>: owner of chain of boutiques, chemist, social worker
<u>Group 8</u>: writer, musician, artist, actor	8	8	<u>Group 8</u>: dancer, writer, musician, actress
<u>Group 9</u>: athlete, hockey player	9	9	<u>Group 9</u>: professional skater swimmer, acrobat

STUDY OF ACHIEVEMENT

STAGE V

ADMINISTRATION BOOKLET

TEACHERS' RATING QUESTIONNAIRE

(GRADE 3)

INSTRUCTIONS

1. Please read each question carefully.
2. Decide from your own knowledge the ratings for each child.

ADJUSTMENT TO SCHOOL PROGRAMME

1. Discipline

Displays behaviour that you, the teacher, consider appropriate for your classroom.

Rate 0: Constant discipline problem; behaviour always inappropriate.

2: Frequent discipline problem; behaviour often inappropriate.

4: Occasional discipline problem; exercises some self control.

6: Very seldom causes discipline problems, exercises self control most of the time.

8: Never causes discipline problems, behaviour always appropriate.

2. Acceptance of Routines

Accepts responsibility in connection with classroom work, seatwork, routine rules and directions.

Rate 0: Never accepts responsibility; needs constant help and attention from teacher.

2: Seldom accepts responsibility; has to be coaxed, inconsistent in his response to routines.

4: Frequently accepts responsibility; tries to look after his tasks.

6: Regularly accepts responsibility; looks after his tasks almost always.

8: Consistently accepts responsibility; looks after his tasks successfully all the time.

3. Acceptance of Goals

Shows desire to make positive contributions towards classroom activities, i.e., answers questions readily, moves in gym willingly, sings in music periods, talks during discussions.

Rate 0: Shows no interest in the activities, makes no contribution.

2: Shows limited interest in a few activities.

4: Responsive towards numerous activities, able to contribute sometimes.

6: Shows interest in a great number of activities, contributes often.

8: Is interested in all activities and contributes whenever possible.

4. Ability to Get Along

Interacts with most of his classmates in a satisfactory manner.

Rate 0: Unable to get along in classroom, (or in schoolyard), always quarrelsome in social contacts.

2: Frequently quarrelsome, or limits social contacts to one or two chosen friends.

4: Gets along with most pupils, and regularly participates in group activities.

6: Often shows leadership ability in group activities, and is popular with most classmates.

8: Consistently shows leadership ability in social contacts, and is trusted by other children.

WORK PERFORMANCE

5. Attention and Work Completion

Has good attention span, is able to attend to teacher and assignments without constant encouragement.

Rate 0: Extremely short attention span, easily distracted, seldom if ever, finished assignments.

2: Short attention span, easily distracted, gets work done occasionally.

4: Able to listen for the duration of the lesson, usually gets his work done.

6: Above average attention span, gets his work done regularly.

8: Superior attention span, will work at any task as long as necessary, till it is completed.

6. Reading

Reads with comprehension and fluency, conveys meaning to listeners.

Rate 0: Reads with little or no comprehension, mostly word by word, without much meaning.

2: Reads with word recognition and comprehension at bottom level of class.

4: Reads with comprehension and fluency, conveys meaning at middle level of class.

6: Reads with word recognition and comprehension at top level of class.

8: Superior reader, able to comprehend most material encountered, e.g., magazines and books at higher grade levels.

7. Language, Self Expression

Can tell or write "stories"; expresses self clearly.

Rate 0: -- Occasionally attempts to tell or write a "story";
-- "Stories" consist of one or two sentences;
-- Sentences may be completely unrelated.

2: -- Frequently attempts to tell, or write, a "story";
-- "Stories" have many irrelevant ideas.

4: -- Regularly attempts to tell or write a "story";
-- Few, if any, irrelevant ideas.

6: -- Consistently attempts to tell or write "stories";
-- Few, if any, irrelevant ideas;
-- Occasional use of complex sentences.

8: -- Tells or writes coherent "stories";
-- No irrelevant ideas, use of complex and compound sentences;
-- Unusually good command of language.

8. Accuracy and Quality of Work

Can usually do work correctly.

Rate 0: Consistently makes errors in copying and seldom, if ever, does assignments the right way.

2: Inconsistent both in accuracy of copying, and in doing assignments.

4: Does work the right way, but needs supervision.

6: Does work the right way and seldom makes errors.

8: Work always accurate with quality beyond requirements.

9. Mathematical Ability

Shows understanding of mathematical concepts and operations, can solve problems.

Rate 0: Very limited ability to understand mathematical concepts and operations, cannot solve problems.

2: Mathematical understanding and problem solving ability is at lower level of class.

4: Usually able to understand mathematical concepts and operations when presented by teacher.

6: Mathematical understanding and problem solving ability is at upper level of class.

8: Superior mathematical ability, - immediately understands mathematical ideas presented by teacher.

CREATIVE THINKING

FOR YOUR GUIDANCE - the following meanings are intended when these words are used.

Intuition: -- Immediate insight;
-- Immediate apprehension by the mind without reasoning.

Divergent: -- Capable of going in different directions;
-- Differ from the usual.

Inventiveness: -- Ability to devise, to originate.

Imagination: -- Mental faculty of forming images of external objects not present to the senses.

10. Imagination and Inventiveness

Regardless of academic achievement, he may be considered imaginative and inventive.

Rate 0: Never shows imagination or inventiveness.

2: Rarely shows imagination or inventiveness.

4: Occasionally shows imagination or inventiveness.

6: Frequently shows imagination or inventiveness.

8: Regularly shows imagination or inventiveness.

11. Use of out-of-school experiences in class

Draws on background experiences.

Rate 0: Shows no background experiences, reports no information pertaining to the world about him.

2: Shows a few background experiences, reports some information pertaining to the world about him.

4: Reasonably well informed.

6: As a result of his background experiences, he is often able to contribute new information.

8: As a result of his background experiences, regularly displays a wealth of knowledge. High degree of sensitivity to the world around him.

12. Creativity

Shows an urge to explore and create; is intuitive.

Rate 0: Always placid, never shows signs of curiosity, no capacity to be "disturbed."

2: Rarely shows curiosity or the desire to explore.

4: Occasionally displays signs of divergent thinking.

6: Frequently displays signs of divergent thinking, has a great urge to explore.

8: Regularly displays signs of divergent thinking, possesses the rare gift of immediate insight.

SCHOOL ABILITY

13. To provide your estimate of this child's ability, try to predict how far you think he will go (ignore financial ability of parents).

Rate 0: Will have difficulty completing grade eight.

2: Will not complete high school.

4: Will complete high school.

6: Will go to university.

8: Will go beyond a B.A.

TABLE 1

VALUES OBTAINED FOR EXPRESSING THE DIFFERENT MULTIPLE REGRESSION EQUATIONS
FOR EACH OF THE M.A.T. SUBTESTS WHEN HOME ENVIRONMENT WAS THE PREDICTOR VARIABLE

Criterion	R	R^2	PREDICTOR VARIABLES: Home Environment — I.Q.	S.E.I.	DOES MOTHER READ NEWSPAPER REGULARLY?	PARENT'S DESIRED EDUCATION FOR CHILD	PARENT'S ANTICIPATED EDUCATION FOR CHILD	NUMBER OF BOOKS IN HOME SUITABLE FOR CHILDREN	PARENT'S DESIRED OCCUPATION FOR THEIR CHILD	PARENT'S ANTICIPATED OCCUPATION FOR THEIR CHILD	LANGUAGE GROUP	DOES MOTHER KNOW TEACHER'S NAME?	Regression Constant
WORD KNOWLEDGE	.4277	.1829				2.6053	1.1882						33.2114
WORD DISCRIMINATION	.4341	.1884				2.5241	1.1789						34.2668
READING	.4252	.1808				2.4674	1.1958						32.6466
SPELLING	.4048	.1639				2.8723	.6708						39.0671
LANGUAGE	.4435	.1967				2.8290	.9476						36.0001
ARITHMETIC COMPUTATION	.3716	.1381				3.1980	.6570						35.7635
ARITHMETIC PROBLEM SOLVING	.4469	.1997				3.3300	1.0973						32.0503

TABLE 2

VALUES OBTAINED FOR EXPRESSING THE DIFFERENT MULTIPLE REGRESSION EQUATIONS FOR EACH OF THE M.A.T. SUBTESTS WHEN SOCIO-ECONOMIC INDEX AND HOME ENVIRONMENT WERE THE PREDICTOR VARIABLES

Criterion	R	R^2	PREDICTOR VARIABLES: I.Q.	S.E.I.	Home Environment: Does mother read newspaper regularly?	Parent's desired education for child	Parent's anticipated education for child	Number of books in home suitable for children	Parent's desired occupation for their child	Parent's anticipated occupation for their child	Language group	Does mother know teacher's name?	Regression Constant
WORD KNOWLEDGE	.4277*	.1829				2.6053	1.1882						33.2144
WORD DISCRIMINATION	.4341*	.1884				2.5241	1.1789						34.2668
READING	.4252*	.1808				2.4674	1.1958						32.6466
SPELLING	.3932	.1546				2.9857	—						41.2824
LANGUAGE	.4528	.2051		.0760		2.7780	.7890						33.8721
ARITHMETIC COMPUTATION	.3716*	.1381				3.1980	.6570						35.7635
ARITHMETIC PROBLEM SOLVING	.4469*	.1997				3.3300	1.0973						32.0503

* These values are identical to those obtained when the home environment variables alone were used as the predictor variables. Socio-economic status added nothing.

TABLE 3

VALUES OBTAINED FOR EXPRESSING THE DIFFERENT MULTIPLE REGRESSION EQUATIONS
FOR EACH OF THE M.A.T. SUBTESTS WHEN I.Q. AND HOME ENVIRONMENT WERE THE PREDICTOR VARIABLES

Criterion	R	R^2	PREDICTOR VARIABLES: I.Q.	Home Environment: S.E.I.	DOES MOTHER READ NEWSPAPER REGULARLY?	PARENT'S DESIRED EDUCATION FOR CHILD	PARENT'S ANTICIPATED EDUCATION FOR CHILD	NUMBER OF BOOKS IN HOME SUITABLE FOR CHILDREN	PARENT'S DESIRED OCCUPATION FOR THEIR CHILD	PARENT'S ANTICIPATED OCCUPATION FOR THEIR CHILD	LANGUAGE GROUP	DOES MOTHER KNOW TEACHER'S NAME?	Regression Constant
WORD KNOWLEDGE	.5540	.3069	.2775			2.0539	.5909						8.6483
WORD DISCRIMINATION	.5487	.3010	.2538			2.0185	.6348						11.7995
READING	.5807	.3373	.3018			1.8721	.5345						5.9630
SPELLING	.5090	.2591	.2593			2.3783	---						16.4843
LANGUAGE	.5631	.3171	.2832			2.3256	---						12.0400
ARITHMETIC COMPUTATION	.5266	.2773	.3669			2.4495	---						2.8402
ARITHMETIC PROBLEM SOLVING	.6239	.3892	.4024			2.5726	---						-2.8174

TABLE 4

VALUES OBTAINED FOR EXPRESSING THE DIFFERENT MULTIPLE REGRESSION EQUATIONS FOR EACH OF THE M.A.T. SUBTESTS WHEN I.Q., SOCIO-ECONOMIC INDEX AND HOME ENVIRONMENT WERE THE PREDICTOR VARIABLES

Criterion	R	R^2	PREDICTOR VARIABLES: I.Q.	S.E.I.	Home Environment: DOES MOTHER READ NEWSPAPER REGULARLY?	PARENT'S DESIRED EDUCATION FOR CHILD	PARENT'S ANTICIPATED EDUCATION FOR CHILD	NUMBER OF BOOKS IN HOME SUITABLE FOR CHILDREN	PARENT'S DESIRED OCCUPATION FOR THEIR CHILD	PARENT'S ANTICIPATED OCCUPATION FOR THEIR CHILD	LANGUAGE GROUP	DOES MOTHER KNOW TEACHER'S NAME?	Regression Constant
WORD KNOWLEDGE	.5540*	.3069	.2775			2.0539	.5909						8.6483
WORD DISCRIMINATION	.5487*	.3010	.2538			2.0185	.6348						11.7995
READING	.5807*	.3373	.3018			1.8721	.5345						5.9630
SPELLING	.5090*	.2591	.2593			2.3783	---						16.4843
LANGUAGE	.5673	.3219	.2764	.0574		2.2696	---						10.7465
ARITHMETIC COMPUTATION	.5266*	.2773	.3669			2.4495	---						2.8402
ARITHMETIC PROBLEM SOLVING	.6239*	.3892	.4024			2.5726	---						-2.8174

* These values are identical to those obtained when the home environment and I.Q. variables alone were used as the predictor variables. Socio-economic status added nothing.

TABLE 5

VALUES OBTAINED FOR EXPRESSING THE DIFFERENT MULTIPLE REGRESSION EQUATIONS
FOR EACH OF THE M.A.T. SUBTESTS WHEN SOCIO-ECONOMIC INDEX WAS THE PREDICTOR VARIABLE

Criterion	R	R^2	PREDICTOR VARIABLES: I.Q.	S.E.I.	Home Environment: DOES MOTHER READ NEWSPAPER REGULARLY?	PARENT'S DESIRED EDUCATION FOR CHILD	PARENT'S ANTICIPATED EDUCATION FOR CHILD	NUMBER OF BOOKS IN HOME SUITABLE FOR CHILDREN	PARENT'S DESIRED OCCUPATION FOR THEIR CHILD	PARENT'S ANTICIPATED OCCUPATION FOR THEIR CHILD	LANGUAGE GROUP	DOES MOTHER KNOW TEACHER'S NAME?	Regression Constant
WORD KNOWLEDGE	.1536	.0236		.1263									44.1516
WORD DISCRIMINATION	.1196	.0143		.0944									46.0759
READING	.1332	.0177		.1059									43.8295
SPELLING	.0988	.0098		.0853									50.6723
LANGUAGE	.1760	.0310		.1427									46.2804
ARITHMETIC COMPUTATION	.0891	.0079		.0923									48.4304
ARITHMETIC PROBLEM SOLVING	.1288	.0166		.1218									45.8936

TABLE 6

VALUES OBTAINED FOR EXPRESSING THE DIFFERENT MULTIPLE REGRESSION EQUATIONS FOR EACH OF THE M.A.T. SUBTESTS WHEN I.Q. WAS THE PREDICTOR VARIABLE

Criterion	R	R^2	PREDICTOR VARIABLES: I.Q.	S.E.I.	DOES MOTHER READ NEWSPAPER REGULARLY? (Home Environment)	PARENT'S DESIRED EDUCATION FOR CHILD (Home Environment)	PARENT'S ANTICIPATED EDUCATION FOR CHILD (Home Environment)	NUMBER OF BOOKS IN HOME SUITABLE FOR CHILDREN (Home Environment)	PARENT'S DESIRED OCCUPATION FOR THEIR CHILD (Home Environment)	PARENT'S ANTICIPATED OCCUPATION FOR THEIR CHILD (Home Environment)	LANGUAGE GROUP (Home Environment)	DOES MOTHER KNOW TEACHER'S NAME? (Home Environment)	Regression Constant
WORD KNOWLEDGE	.4678	.2189	.3466										12.4894
WORD DISCRIMINATION	.4547	.2068	.3234										15.6128
READING	.5089	.2590	.3646										9.4713
SPELLING	.4082	.1666	.3178										20.4460
LANGUAGE	.4657	.2169	.3405										15.9138
ARITHMETIC COMPUTATION	.4574	.2092	.4272										6.9205
ARITHMETIC PROBLEM SOLVING	.5467	.2989	.4658										1.4680

TABLE 7

VALUES OBTAINED FOR EXPRESSING THE DIFFERENT MULTIPLE REGRESSION EQUATIONS
FOR EACH OF THE M.A.T. SUBTESTS WHEN I.Q. AND SOCIO-ECONOMIC INDEX WERE THE PREDICTOR VARIABLES

Criterion	R	R^2	PREDICTOR VARIABLES: I.Q.	S.E.I.	Home Environment: Does mother read newspaper regularly?	Parent's desired education for child	Parent's anticipated education for child	Number of books in home suitable for children	Parent's desired occupation for their child	Parent's anticipated occupation for their child	Language group	Does mother know teacher's name?	Regression Constant
WORD KNOWLEDGE	.4734	.2241	.3370	.0602									11.1375
WORD DISCRIMINATION	.4547*	.2068	.3234	---									15.6128
READING	.5089*	.2590	.3646	---									9.4713
SPELLING	.4082*	.1666	.3178	---									20.4460
LANGUAGE	.4753	.2259	.3280	.0785									14.1528
ARITHMETIC COMPUTATION	.4574*	.2092	.4272	---									6.9205
ARITHMETIC PROBLEM SOLVING	.5467*	.2989	.4658	---									1.4680

* These values are identical to those obtained when the I.Q. variables alone were used as the predictor variables. Socio-economic status added nothing.

TABLE 8

VALUES OBTAINED FOR EXPRESSING THE DIFFERENT MULTIPLE REGRESSION EQUATIONS FOR EACH OF THE TEACHER RATING SUBTESTS WHEN HOME ENVIRONMENT WAS THE PREDICTOR VARIABLE

Criterion	R	R^2	PREDICTOR VARIABLES: Home Environment — I.Q.	S.E.I.	DOES MOTHER READ NEWSPAPER REGULARLY?	PARENT'S DESIRED EDUCATION FOR CHILD	PARENT'S ANTICIPATED EDUCATION FOR CHILD	NUMBER OF BOOKS IN HOME SUITABLE FOR CHILDREN	PARENT'S DESIRED OCCUPATION FOR THEIR CHILD	PARENT'S ANTICIPATED OCCUPATION FOR THEIR CHILD	LANGUAGE GROUP	DOES MOTHER KNOW TEACHER'S NAME?	Regression Constant
ADJUSTMENT	.2576	.0664			-.5080	1.2908	.4369						15.3872
PERFORMANCE	.3815	.1455			-.6447	2.4136	.5378						13.3105
CREATIVITY	.3436	.1181		-.5082		.9949	.4510						7.2431
PREDICTION	.3609	.1303		-.3898		.4592							2.6269

TABLE 9

VALUES OBTAINED FOR EXPRESSING THE DIFFERENT REGRESSION EQUATIONS FOR EACH OF THE TEACHER RATING SUBTESTS WHEN SOCIO-ECONOMIC INDEX AND HOME ENVIRONMENT WERE THE PREDICTOR VARIABLES

Criterion	R	R^2	PREDICTOR VARIABLES											
					Home Environment									
			I.Q.	S.E.I.	DOES MOTHER READ NEWSPAPER REGULARLY?	PARENT'S DESIRED EDUCATION FOR CHILD	PARENT'S ANTICIPATED EDUCATION FOR CHILD	NUMBER OF BOOKS IN HOME SUITABLE FOR CHILDREN	PARENT'S DESIRED OCCUPATION FOR THEIR CHILD	PARENT'S ANTICIPATED OCCUPATION FOR THEIR CHILD	LANGUAGE GROUP	DOES MOTHER KNOW TEACHER'S NAME?	Regression Constant
ADJUSTMENT	.2576*	.0664			-.5080	1.2908	.4369						15.3872
PERFORMANCE	.3815*	.1455			-.6447	2.4136	.5378						13.3105
CREATIVITY	.3436*	.1181		.5082		.9949	.4510						7.2431
PREDICTION	.4002	.1602		.0133		.4234	.1819						1.0646

* These values are identical to those obtained when the home environment variables alone were used as the predictor variables. Socio-economic status added nothing.

TABLE 10

VALUES OBTAINED FOR EXPRESSING THE DIFFERENT REGRESSION EQUATIONS FOR EACH OF THE TEACHER RATING SUBTESTS WHEN I.Q. AND HOME ENVIRONMENT WERE THE PREDICTOR VARIABLES

Criterion	R	R^2	PREDICTOR VARIABLES											
					Home Environment									
			I.Q.	S.E.I.	DOES MOTHER READ NEWSPAPER REGULARLY?	PARENT'S DESIRED EDUCATION FOR CHILD	PARENT'S ANTICIPATED EDUCATION FOR CHILD	NUMBER OF BOOKS IN HOME SUITABLE FOR CHILDREN	PARENT'S DESIRED OCCUPATION FOR THEIR CHILD	PARENT'S ANTICIPATED OCCUPATION FOR THEIR CHILD	LANGUAGE GROUP	DOES MOTHER KNOW TEACHER'S NAME?	Regression Constant
ADJUSTMENT	.3209	.1030	.0969			-.5814	1.1404	.2279					6.9750
PERFORMANCE	.4954	.2454	.1989			-.7812	2.1130	.1058					-4.0382
CREATIVITY	.4355	.1897	.1161				.8098						-3.0154
PREDICTION	.5510	.3036	.0557				.3309	.1265			.5438		-4.2879

TABLE 11

VALUES OBTAINED FOR EXPRESSING THE DIFFERENT REGRESSION EQUATIONS FOR EACH OF THE TEACHER RATING SUBTESTS WHEN I.Q., SOCIO-ECONOMIC INDEX AND HOME ENVIRONMENT WERE THE PREDICTOR VARIABLES

Criterion	R	R^2	PREDICTOR VARIABLES: I.Q.	S.E.I.	Home Environment: Does mother read newspaper regularly?	Parent's desired education for child	Parent's anticipated education for child	Number of books in home suitable for children	Parent's desired occupation for their child	Parent's anticipated occupation for their child	Language group	Does mother know teacher's name?	Regression Constant
ADJUSTMENT	.3209*	.1030	.0969			-.5814	1.1404	.2279					6.9750
PERFORMANCE	.4954*	.2454	.1989			-.7812	2.1130	.1058					-4.0382
CREATIVITY	.4355*	.1897	.1161				.8098						-3.0154
PREDICTION	.5510*	.3036	.0557				.3309	.1265			.5438		-4.2879

* These values are identical to those obtained when I.Q. and the home environment variables were used as the predictor variables. Socio-economic status added nothing.

TABLE 12

VALUES OBTAINED FOR EXPRESSING THE DIFFERENT REGRESSION EQUATIONS FOR EACH OF THE TEACHER RATING SUBTESTS WHEN I.Q. WAS THE PREDICTOR VARIABLE

Criterion	R	R^2	PREDICTOR VARIABLES											
					Home Environment									
			I.Q.	S.E.I.	DOES MOTHER READ NEWSPAPER REGULARLY?	PARENT'S DESIRED EDUCATION FOR CHILD	PARENT'S ANTICIPATED EDUCATION FOR CHILD	NUMBER OF BOOKS IN HOME SUITABLE FOR CHILDREN	PARENT'S DESIRED OCCUPATION FOR THEIR CHILD	PARENT'S ANTICIPATED OCCUPATION FOR THEIR CHILD	LANGUAGE GROUP	DOES MOTHER KNOW TEACHER'S NAME?	Regression Constant
ADJUSTMENT	.2525	.0637	.1192										7.6639
PERFORMANCE	.4021	.1617	.2375										-2.3542
CREATIVITY	.3747	.1404	.1360										-1.6664
PREDICTION	.4816	.2319	.0658										-2.8215

TABLE 13

VALUES OBTAINED FOR EXPRESSING THE DIFFERENT REGRESSION EQUATIONS FOR EACH OF THE TEACHER RATING SUBTESTS WHEN SOCIO-ECONOMIC INDEX WAS THE PREDICTOR VARIABLE

Criterion	R	R^2	PREDICTOR VARIABLES: I.Q.	S.E.I.	Home Environment: DOES MOTHER READ NEWSPAPER REGULARLY?	PARENT'S DESIRED EDUCATION FOR CHILD	PARENT'S ANTICIPATED EDUCATION FOR CHILD	NUMBER OF BOOKS IN HOME SUITABLE FOR CHILDREN	PARENT'S DESIRED OCCUPATION FOR THEIR CHILD	PARENT'S ANTICIPATED OCCUPATION FOR THEIR CHILD	LANGUAGE GROUP	DOES MOTHER KNOW TEACHER'S NAME?	Regression Constant
ADJUSTMENT													
PERFORMANCE													
CREATIVITY													
PREDICTION	.1682	.0283		.0255									3.1263

TABLE 14

VALUES OBTAINED FOR EXPRESSING THE DIFFERENT REGRESSION EQUATIONS FOR EACH OF THE TEACHER RATING SUBTESTS WHEN I.Q. AND SOCIO-ECONOMIC INDEX WERE THE PREDICTOR VARIABLES

Criterion	R	R^2	PREDICTOR VARIABLES											Regression Constant
					Home Environment									
			I.Q.	S.E.I.	DOES MOTHER READ NEWSPAPER REGULARLY?	PARENT'S DESIRED EDUCATION FOR CHILD	PARENT'S ANTICIPATED EDUCATION FOR CHILD	NUMBER OF BOOKS IN HOME SUITABLE FOR CHILDREN	PARENT'S DESIRED OCCUPATION FOR THEIR CHILD	PARENT'S ANTICIPATED OCCUPATION FOR THEIR CHILD	LANGUAGE GROUP	DOES MOTHER KNOW TEACHER'S NAME?		
ADJUSTMENT	.2525*	.0637	.1192											7.6639
PERFORMANCE	.4021*	.1617	.2375											-2.3542
CREATIVITY	.3747*	.1404	.1360											-1.6664
PREDICTION	.4889	.2391	.0637	.0130										-3.1134

* These values are identical to those obtained when the I.Q. variables alone were used as the predictor variables. Socio-economic status added nothing.